

EFFECTIVENESS OF LOCAL AGENCY SUSTAINABILITY PLANS

A successful sustainability plan allows you to identify and implement goals, milestones and metrics to measure success and address environmental concerns, economic conditions and social equity within your community.



EFFECTIVENESS OF LOCAL AGENCY SUSTAINABILITY PLANS

The purpose of a sustainability plan is to identify objectives, goals and strategies for the community to help coordinate efforts, track progress and identify priorities to implement their vision of sustainability. Thus, a sustainability plan is one of the most important factors in a community or organization's achievement of sustainability. It serves as the roadmap for building and operating a more environmentally-sustainable community or organization. A sustainability plan focuses on issues that need to be addressed, as well as potential solutions, and identifies organizational resources available for tackling the challenges.

The quality of a sustainability plan can be an indicator of whether a community or organization's sustainability program will succeed or fail. An effective sustainability plan is not necessarily an assurance that the implementation will succeed, but a non-effective sustainability plan will most certainly lead to a failed sustainability program.

This white paper studies the effectiveness of local agency sustainability plans; specifically California's sustainability plans. However, many of the ideas and principles detailed in this white paper could apply to other states and jurisdictions worldwide. The strengths and weaknesses of specific local agency sustainability plans will be evaluated, and options for improvement will be explored.

BACKGROUND

The Global Warming Solutions Act of 2006 (also known as Assembly Bill 32 or AB 32) and the Sustainable Communities and Climate Protection Act of 2008 (also known as Senate Bill 375 or SB 375) are arguably the precursors to California's local agency sustainability plans.

AB 32 is a landmark piece of legislation that limited the state's level of greenhouse gas (GHG) emissions, requiring California to lower its total GHG emissions to its 1990 levels by the year 2020. AB 32 likewise authorized the California Air Resources Board (CARB) to regulate sources of GHG emissions, including cars and pickup trucks.

SB 375 required CARB to set regional targets for the reduction of GHG emissions. Examples include lessening the amount of time people spend in traffic, locating housing near job centers and making public transport systems more efficient.

Since the enactment of AB 32 and SB 375, businesses, environmentalists, advocacy groups, cities and counties have collaborated to form various sustainability plans, which are all designed to meet state-assigned GHG reduction targets.



CALIFORNIA'S SUSTAINABILITY PLANS

California is decreasing its environmental footprint through more sustainable state government operations and practices, consisting of, but not limited to, energy-efficient state building design and construction, renewable energy generation at state facilities, environmentally-favorable state purchasing, and sustainable state-owned vehicles. California's local agencies should aim for sustainable actions in achieving such plans.

At the forefront of California's sustainability planning movement are government councils, metropolitan planning organizations and transport planning agencies that form the *California Sustainability Alliance*, an inter-industry organization that aims to promote cost-effective energy efficiency.

The key strategies of the *California Sustainability Alliance* are:

- Raise public support for energy efficiency by promoting awareness about the benefits and costs of energy efficiency and sustainability
- Encourage market leaders and other organizations to voluntarily adopt energy efficiency through incentives such as rewards, awards and recognition
- Boost effectiveness and profitability of energy efficiency programs through sustainability measures like transportation management, smart land use and waste management
- Strengthen energy efficiency and sustainability messages through existing marketing, education and outreach channels
- Develop inter-discipline between future leaders to collaborate on promoting awareness for cost-effective energy efficiency
- Align goals strategically based on potential attainability.



CALIFORNIA AGENCIES ADDRESSING CLIMATE CHANGE

The California Sustainability Alliance established a utility-funded program to help local governments surmount the challenge of implementing detailed objectives or recognizing new mandates with limited staff and resources. This program is called The Climate Action Fellows (CAF) Program Model.

Under the program, local university students are called Climate Action Fellows and aid local governments in addressing climate protection mandates, voluntary goals and commitments.

The CAF program delivered essential insights on sustainability planning while establishing concrete results for participating local governments in relation to their climate action goals. The team identified crucial elements and recommended improvements related to the program for future implementation:

- Identification of the municipal partner, the target audience and its scope of work, and project planning before recruiting fellows are significant
- Having multiple fellows employed who have synergistic skills is advantageous for the program
- The program model scope and focus should be aligned with the scheduled recruiting of fellows and securing their program onboarding and training
- A second CAF pilot with a municipal partner is beneficial regarding its different profile and climate protection needs
- Accessibility for meetings and mentoring from a preferred CAF program implementer with the local presence of the Southern California Gas Company (SCG) is necessary

“IT IS CRUCIAL TO GET THE RIGHT TEAM AND ESTABLISH SYNERGY AND BUY-IN AMONG THE VARIOUS STAKEHOLDERS FROM THE INITIAL PHASES.”



OPEN SPACE

Protected lands offer multiple environmental benefits, and the long-term stewardship and management of these state-owned lands are a significant priority. The California Land Conservation Act of 1965, generally referred to as the Williamson Act, allows local governments to enter contracts with private landowners with the intention of restricting certain parcels of land for agricultural or open use.

The California Land Conservation Act 2014 Status Report, published in March 2015, shows that more than 16 million of the State's 30 million acres of farm and ranch land have become part of the program. The sustainable preservation of agricultural and open space lands are accomplished under the Land Conservation Act in 1965 which opposes "premature and unnecessary conversion to urban uses", according to Government Code Section 51220.

WATER MANAGEMENT

Responding to the drought, California Governor Jerry Brown presented a plan to lessen water consumption by 25%. One challenge is the fact that agriculture consumes approximately 80% of the water, while 14% goes to homes, and the remaining 6% goes to commercial facilities.² Californians will need and depend on upgraded infrastructure focused on effectiveness, sustainability and reusability, as well as on the expensive option of desalination.

The 2015 Urban Water Management Plan (UWMP) is due to be adopted by July 1, 2016. The UWMPs are plans created by California's urban water suppliers to maintain their long-term resource planning and ensure sufficient water supplies can meet existing and upcoming demands.

WASTE MANAGEMENT

The vision for 2050 goals in the Waste Management Sector for meeting GHG emissions and waste reduction targets is founded on the principle that California must take ownership of managing the waste produced within the State.

With waste threatening a sustainable and low-carbon future, waste decrease targets and agendas should support: a) taking full possession of the waste produced in California, b) amplifying recycling efforts and boosting recycling, c) creating the infrastructure required to maintain a sustainable, low-carbon waste management system inside California, d) enhancing the sustainability of California's waste management infrastructure, and e) cutting down the amount of waste produced. These principles provide an outline for sustainability plans regarding waste management in California.

THE CAP-AND-TRADE PROGRAM

Another program adopted in California is the Cap-and-Trade program, centered on the principle of managing GHG emissions. Cap-and-Trade is a market-based tool established to reduce GHGs from numerous sources. As part of the implementation of AB 32, this tool sets a limit on GHGs and reduces the compliance costs of attaining AB 32 goals. Facilities that release more than 25,000 metric tons of carbon dioxide equivalents (mtCO₂e) on a yearly basis are required to submit annual reports according to the Cap-and-Trade regulations, an environmentally-operative and economically useful response to climate change.



EXAMPLES OF STRATEGIES, PROGRAMS AND POLICIES

AIR QUALITY AND GHGS

Air pollution is a critical environmental issue for California. It is a term used to describe the density of particulate or gaseous matter in the atmosphere, which causes health problems for citizens and harms forests and agricultural crops.

In the City of San Francisco, for example, GHGs mainly come from the burning of fossil fuels in vehicles, in power plants and during construction. Another GHG, methane, is produced from the landfill used by the city for solid waste disposal. The Climate Action Plan (CAP) for San Francisco includes the city's sustainability plan; their first step in creating the CAP was to perform a baseline inventory of GHG emissions. The emissions being produced by city residents, businesses and municipal operations will be identified, categorized (major sources) and recorded by quantity through the inventory.

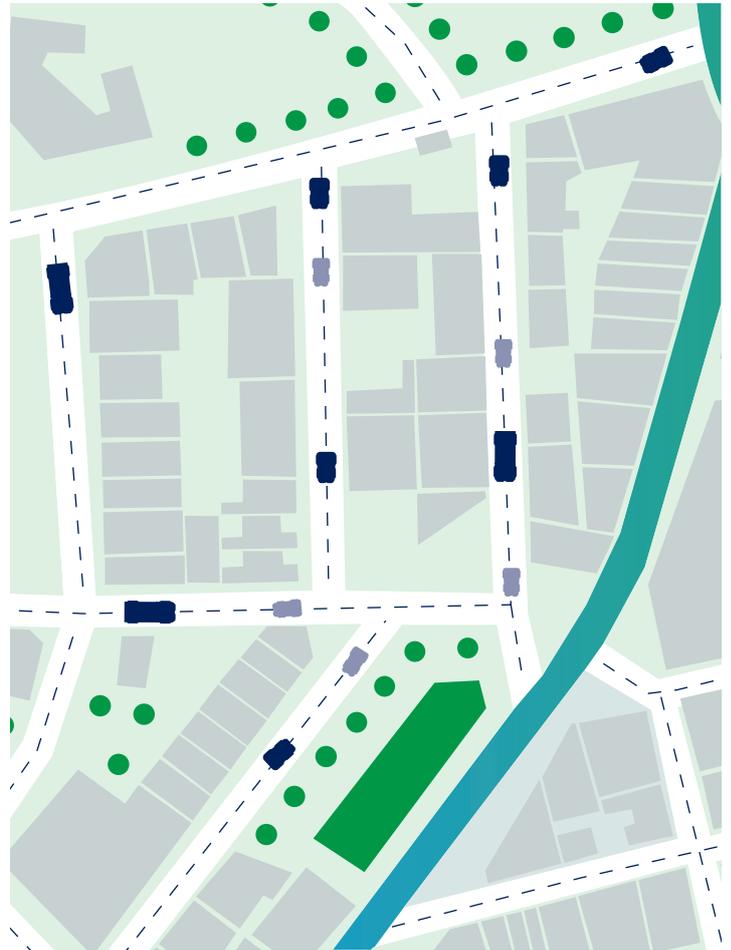
San Francisco's reduction goal was to be 20% below 1990 levels by 2012. This is around 2.5 million tons below 2000 levels. As of the 2013 update on the Climate Action Strategy of San Francisco, local government, businesses and private citizens have made remarkable progress by decreasing the city-wide carbon footprint by 14.5%.

TRANSPORTATION PLANNING

In 2014, the California Transportation Commission went to Santa Ana, California to decide which transportation project would obtain urgent funding for five years in the State's Transportation Improvement Program (STIP). As the fourth densest city in the nation, with numerous residents dependent on transit for everyday travel, the quantity of pedestrians and bicyclists is higher in Santa Ana than in most California cities. According to the California Department of Transportation's (Caltrans) survey, 18% of trips by Californians are made by walking and biking. Despite this, STIP recommended just 2% of the funding to be allocated to support biking and walking trips.

With STIP investing over 81% of its resources in road and highway projects and 17% for transit, it seemed unbalanced. With its 2016 workshop summary, STIP is poised to provide more support for bike and pedestrian projects.

Another example is the City of Alameda, which adopted a CAP that includes transportation in their 6 Action Areas. This area consists of strategies and measures aimed at decreasing emissions from vehicle travel, which account for over half of the city's total GHG emissions. One of the primary sources of air pollutants in the region is vehicle travel. With city employees commuting to and from the workplace, this is the largest single source of GHG emissions in the city's emissions inventory, at 39%. Vehicle use on the job accounts for another 12%.



“THESE STRATEGIES, COMBINED WITH OTHERS WILL HELP DECREASE GHGS AND ALSO CREATE A MANAGEABLE TRANSPORTATION PLAN.”

Some plans under the commuter strategy include:

- development of thorough employee education and outreach tactics on commute alternatives
- expansion of employee commuter benefits programs
- growth and promotion of shuttles (or related services) to link major county facilities with transit systems.

LAND-USE PLANNING

For the City of Santa Monica, land-use planning is included in their Sustainable City Plan. Their goals include the implementation of land-use and transportation planning and policies to create solid, mixed-use projects, develop urban villages created to maximize cost-effective housing, and encourage walking, bicycling and the practice of using existing and upcoming public transit systems.

In the CAP of the City of Berkeley, land-use is connected to transportation planning. Increasing the parking rate is one of their implementing actions, which will discourage driving and acknowledge the value of using alternative ways of travelling.

Quay Valley is primed to be developed as one of California's newest towns in 2016. The town will be built from the ground up with sustainability at its core. Located between Los Angeles and San Francisco, the neighborhoods will be set to encourage walking, bicycling and group transportation to decrease the need for car trips. This will reduce air pollution and congestion.

The landscaping and land use at Quay Valley will bring residents closer to nature. It will allow the site to be a living part of the surrounding landscape and to integrate nature as part of daily life.

PARKS AND OPEN SPACE

In the City of Benicia, parks and open space provide residents with recreational opportunities and scenic beauty, according to their CAP. The associated emissions are the effects of standard maintenance and irrigation of parks, open space and streetscapes. Present actions to lessen emissions are indicated in the General Plan, which denotes that the city will implement water reduction measures and continue to implement water conservation best management practices.

Hollywood is a popular community, and Hollywood Central Park is using sustainability as its main principle in constructing a passageway that will not disrupt the environment. The project will create a green outdoor park on top of the 101 freeway, with community facilities including a baseball diamond, walking trails, a dog park, a playground, and water features and recreational amenities.

ECONOMIC DEVELOPMENT

California is facing many issues that threaten its economic stability, including water supply, revenue vagueness, debt, retirement benefits, healthcare, education (K-12), high-speed rail, crime and corrections, economy and civil engagement.

Economic development is also connected to energy use. The General Plan of San Mateo includes goals and policies which regulate urban development, the protection of the natural environment and public safety. These goals reflect the aspiration to mold the city as an environmentally, socially and economically sustainable city. Increasing the amount of energy in the community with the use of renewable sources decreases GHG emissions and intensity, reduces the cost of electricity for residents, and improves the local economy. The General Plan also sees a distinguished city with balanced commercial and residential growth, with well-known viable neighborhoods driven by a solid, healthy economic and financial base.

The City of Chico, for example, has a General Plan Sustainability Element that addresses sustainability in a variety of ways. The Land-Use Element provides policies that promote compact, walkable and mixed-use development. The Circulation Element provides guidance for improved connectivity between neighborhoods, jobs and other services. The Economic Development Element recommends a better jobs-to-housing ratio to reduce vehicular miles traveled.

WATER MANAGEMENT

Water, once an abundant natural resource, is now a prized commodity due to droughts and overuse. The supply, treatment and dissemination of water and wastewater treatment use ample amounts of electricity. In the City of Laguna Beach, water-related electricity use is high, since 100% of water comes from two water projects, the State Water Project and Colorado River Water Project. Laguna Beach's CAP states that citizens can make a noteworthy decrease in GHG emissions by reducing the use of water.

Specific reduction measures include: educating the public, landscape guidelines, water use in a Green Building Program, greywater standards, swimming pools, recycled water and rainwater catchment. If all these programs are implemented successfully, the expected results will create greater awareness, and less wastewater and urban runoff will reach the ocean.

RECYCLING

The California Department of Resources Recycling and Recovery (CalRecycle) combines the state's recycling and waste management programs and maintains the tradition of environmental stewardship. CalRecycle orders and provides supervision for all of California's state-managed waste management and recycling programs. In the City of Dublin's CAP, their goal is to reduce waste sent to the landfill by 75%. To attain this goal, the city has implemented a variety of measures, which consist of the expansion of existing commercial and residential recycling and compositing platforms, and enlarging the community education and outreach initiatives. Indoor recycling is also encouraged, as well as concrete recycling for the betterment of the city.

EVALUATION OF PLANS

Even with Governor Brown's State of Emergency in January of 2015, the ongoing drought and warm weather result in California 'smog days'. The changes in California continue to require local agencies to adapt to climate change.

As an example, San Francisco plans to further improve air quality and attain lower GHG emissions using accurate inventory data to identify major sources of emissions.

The city of Alameda's transportation plan is connected to harmful particulate matters that pollute the air. The reduction of vehicles will help decrease emissions if the plan is implemented properly.

Land-use planning by the city of Berkley is also connected to the transportation plan of the city of Alameda. Land-use planning is about maximizing the usage of land; with the higher prices for parking lots, there may be a decrease in vehicular trips to and from work.

Parks and open space plus economic development in the cities of Benicia and San Mateo reduce GHG emissions in both places by lessening the water usage during irrigation for open spaces. As for GHG emissions in San Mateo, increasing the use of energy from renewable sources will help in the reduction process.

Water management and recycling in the cities of Laguna Beach and Dublin reduce GHG emissions by the proper allocation of liquid and solid wastes.

“SUSTAINABILITY PLANS ASSIST AGENCIES WITH IDENTIFYING GOALS, TARGETS, KEY PERFORMANCE INDICATORS AND PROGRESS. HOWEVER, THERE IS MORE THAT CAN BE DONE TO ENHANCE THE ENVIRONMENT, ECONOMIC INTERESTS AND QUALITY OF LIFE FOR TODAY AND FUTURE GENERATIONS.”



THE NEXT STEP

Sustainability goes beyond compliance to regulatory standards. Having a sustainable element in the general plan better assists agencies with implementing goals, objectives and policies established in sustainability plans. California law requires local governments have a general plan. Furthermore, the state requires seven elements within the general plan, including land use, circulation, housing, conservation, open space, noise and safety.

Principles of sustainability should be incorporated in general plans through interlinking goals, regulations, implementation programs and clearly outlined actions. This helps in identifying what other programs should be implemented for sustainability.

The effectiveness of local agency sustainability plans are only as good as the framework of the plan. Sustainability plans require intensive research, thorough planning and a commitment to implement. Existing and upcoming plans in California require fully-developed and well-financed strategies. With a focus on sustainability in the state of California, agencies should consider updating objectives, policies and goals in every general plan element or even adopting a sustainability element that addresses sustainability at the agency level.



HOW ADEC INNOVATIONS CAN HELP

LOCAL AGENCY SUSTAINABILITY PLANS CAN BE EFFECTIVE WITH THE RIGHT GUIDANCE AND DIRECTION. ADEC INNOVATIONS HELPS GOVERNMENTS AND ORGANIZATIONS IDENTIFY GOALS, MILESTONES AND METRICS TO MEASURE SUCCESS AND ADDRESS ENVIRONMENTAL CONCERNS, ECONOMIC CONDITIONS AND SOCIAL EQUITY WITHIN YOUR COMMUNITY.

REFERENCES:

- California Sustainability Alliance. (April 2015). Climate Action Fellows Pilot Final Report. Retrieved from: http://sustainca.org/sites/default/files/publications/2014_Climate_Action_Fellows_Pilot_Report.pdf
- California Air Resources Board. (June 30 2015). Cap-and-Trade Program. Retrieved from: <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>
- California Air Resources Board. (January 2015) Cap-and-Trade Regulations. Retrieved from: http://www.arb.ca.gov/cc/capandtrade/capandtrade/unofficial_c&t_012015.pdf
- California Sustainability Alliance. (December 2009). General Plan Survey. Retrieved from: http://sustainca.org/tools/green_general_plan_toolkit/local_government_needs
- California Air Pollution Control Officers Association. (Date retrieved: 2015). Retrieved from: <http://www.capcoa.org/about/>
- California Department of Transportation. (November 2013). California Transportation Plan 2040. Retrieved from: http://www.dot.ca.gov/hq/tpp/californiatransportationplan2040/Documents/index_docs/CTP-FactSheet17_022114.pdf#zoom=75
- California Energy Commission. (Date retrieved: 2015). Retrieved from: <http://www.energy.ca.gov/landuse/>
- California Commission for Economic Development. (Date retrieved: 2015). Retrieved from: <http://www.ltg.ca.gov/ced.html>
- California Department of Conservation. (Date retrieved: 2015). The Land Conservation Act. Retrieved from: <http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx>
- California Department of Water Resources. (Date retrieved: 2015). Retrieved from: <http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx>
- California Department of Water Resources. (Date retrieved: 2015). California Water Plan. (2013). Retrieved from: <http://www.waterplan.water.ca.gov/technical/waterplancode.cfm>
- California Department of Resources Recycling and Recovery. (Date retrieved: 2015). About CalRecycle. (December 2014). Retrieved from: <http://www.calrecycle.ca.gov/AboutUs/>
- Sustainable Communities and Climate Protection Act of 2008, S. (2008) Retrieved from: http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_375_bill_20080930_chaptered.pdf
- California Department of Transportation. (Date retrieved: 2015). California Metropolitan Planning Organizations. Retrieved from: http://www.dot.ca.gov/hq/tpp/offices/orip/index_files/Updated%20Files/MPO-RTPA_1-10.pdf
- Brown, E. G. (2015). 2015 California's Five-year Infrastructure Plan. Retrieved from: <http://www.ebudget.ca.gov/2015-Infrastructure-Plan.pdf>
- Brown, E. G., Laird, J., & Nechodom, M. (2015). The California Land Conservation Act 2014 Status Report. Retrieved from: http://www.conservation.ca.gov/dlrp/lca/stats_reports/Documents/2014%20LCA%20Status%20Report_March_2015.pdf
- Galucci, M. (April 29 2015). California Drought 2015: Dry Air, Landscape Worsen State's Air Pollution. Retrieved from: <http://www.ibtimes.com/california-drought-2015-dry-air-landscape-worsen-states-air-pollution-1902001>
- Government Code 51220. (Date retrieved: 2015). Retrieved from: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=51001-52000&file=51220-51223>
- Cooley, H., Gleick, P. & Wilkinson, R. (2014) Agricultural Water Conservation and Efficiency Potential in California. Retrieved from: <http://www.nrdc.org/water/files/ca-water-supply-solutions-ag-efficiency-IB.pdf>
- Department of Water Resources. (2015) Urban Water Management Plans. Retrieved from: <http://www.water.ca.gov/urbanwatermanagement/>
- California Air Resources Board. (Date retrieved: 2015) Waste Sector Working paper. Retrieved from: http://www.arb.ca.gov/cc/scopingplan/2013_update/waste.pdf
- California Transportation Commission. (Date retrieved: 2015). State Transportation Improvement Program. Retrieved from: <http://www.catc.ca.gov/programs/stip.htm>
- California Transportation Commission. (Date retrieved: 2015). Comprehensive Travel Survey Shows More Californians Are Walking, Biking, and Riding Transit. Retrieved from: <http://www.dot.ca.gov/hq/paffairs/news/pressrel/14pr021.htm>
- California Transportation Commission. (Date retrieved: 2015). State Transportation Improvement Program Meeting Summary. Retrieved from: http://www.catc.ca.gov/programs/STIP/2016_STIP/2016_STIP_Guidelines_Workshop_MeetingSummary061114.pdf
- City of San Francisco. (2004) Climate Action Plan. Retrieved from: <http://www.sfenvironment.org/sites/default/files/fliers/files/climateactionplan.pdf>
- City of Alameda. (2010) Climate Action Plan. Retrieved from: <http://www.acgov.org/sustain/documents/climateactionplan.pdf>
- City of Santa Monica. (2014). Sustainable City Plan. Retrieved from: <http://www.smgov.net/uploadedFiles/Departments/OSE/Categories/Sustainability/Sustainable-City-Plan.pdf>
- City of Benicia. (Date retrieved: 2015) Climate Action Plan. Retrieved from: http://www.ci.benicia.ca.us/index.asp?Type=B_BASIC&SEC=%7B19078EB3-2602-4764-A04F-28A14001A918%7D&DE=%7B015EF02D-6AC8-471C-88AB-3710BE5CDF2D%7D
- City of Dublin. (2013) Climate Action Plan. Retrieved from: http://www.ca-ilg.org/sites/main/files/file-attachments/dublin-climate-action-plan_update_2013.pdf
- City of Laguna Beach. (2009) Climate Action Plan. Retrieved from: <http://www.lagunabeachcity.net/civicax/filebank/blobdload.aspx?blobid=2332>
- City of San Mateo. (2015) Climate Action Plan. Retrieved from: <http://www.cityofsanmateo.org/%5C/DocumentCenter/View/44698>
- City of Berkeley. (2009) Climate Action Plan. Retrieved from: http://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3_-Energy_and_Sustainable_Development/Berkeley%20Climate%20Action%20Plan.pdf
- Grow Holdings. (Date retrieved: 2015) About Quay Valley. Retrieved from: <http://growholdings.com/quay-valley/about-quay-valley/>

**REQUEST MORE INFORMATION TODAY AT
WWW.ADEC-INNOVATIONS.COM**

NORTH AMERICA | EUROPE | AFRICA | AUSTRALIA | ASIA